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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,584	07/16/2003	Dong-Gyu Kim	SEC.310D3	7434

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EXAMINER	
TON, MINH TOAN T	
ART UNIT	**PAPER NUMBER**
2871	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/619,584	KIM ET AL.	
	Examiner	Art Unit	
	Toan Ton	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *papers filed 01/31/05*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *36-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art (APA hereinafter, Figures 1-2) in view of Hiraishi et al (US 5831708) and Wakai et al (US 5327001).

APA discloses all except for the third signal line interposing the first and the second signal lines.

Basic/inherent elements such as a gate insulating layer, a semiconductor layer, a drain electrode, a source electrode, a protective layer having a contact hole exposing the drain electrode, a pixel electrode connected to the drain electrode through a contact hole are common and known in TFT (active matrix)-LCD devices. Wakai/Hiraishi discloses a conventional TFT-LCD device comprising basic/inherent elements such as a gate insulating layer, a semiconductor layer, a drain electrode, and a source electrode. Wakai discloses the LCD device comprising a protective layer having a contact hole exposing the drain electrode, a pixel electrode connected to the drain electrode through a contact hole for achieving advantages such as minimizing/preventing short circuit to the device. Therefore, it would have been at least obvious to one of ordinary skill in the art to employ basic/inherent elements such as a gate insulating layer, a semiconductor layer, a drain electrode, a source electrode, a protective layer having a

contact hole exposing the drain electrode, a pixel electrode connected to the drain electrode through a contact hole, as common and known in TFT (active matrix)-LCD devices, and also for achieving advantages such as minimizing/preventing short circuit to the device.

Hiraishi discloses (see at least col. 18, last paragraph to col. 19, first paragraph and an embodiment 7): in the conventional (common) device, an extra line is arranged outside of the display area, and a connection defect is repaired by connecting the disconnected section to the extra line with the irradiation of a laser. However, with this, there yields several disadvantages such as the number of lines which can be repaired is limited by the number of extra lines since providing a large number of extra lines is not preferred because this causes an increase in the non-display area. Hiraishi solves these disadvantages through forming the extra/repairing line (Applicant's third line) on the inside of the display area. Therefore, it would have been obvious to one of ordinary skill in the art to employ a third signal line interposing the first and second signal lines (formed on the inside of the display area) for avoiding disadvantages such as the number of lines which can be repaired is limited by the number of extra lines since providing a large number of extra lines is not preferred because this causes an increase in the non-display area. Hiraishi also discloses the connection lines passing between the adjacent gate lines and partly overlaps both the gate lines.

Forming the pixel electrode overlapping the bus lines is known in the art for yielding advantages such as large aperture (display area) ratio. Therefore, it would have been obvious to one of ordinary skill in the art to form the pixel electrode overlapping the bus lines (gate or/and data lines), as known in the art, for yielding advantages such as large aperture (display area) ratio.

Response to Arguments

2. Applicant's arguments filed 01/31/05 have been fully considered but they are not persuasive.

Applicant contended that APA fails to disclose elements such as a gate insulating layer, a semiconductor layer, a drain electrode, a source electrode, a protective layer having a contact hole exposing the drain electrode, a pixel electrode connected to the drain electrode through a contact hole.

However, basic/inherent elements such as a gate insulating layer, a semiconductor layer, a drain electrode, and a source electrode are common and known in TFT (active matrix)-LCD devices (as at least disclosed by Wakai/Hiraishi). Further, Wakai discloses the LCD device comprising a protective layer having a contact hole exposing the drain electrode, a pixel electrode connected to the drain electrode through a contact hole for achieving advantages such as minimizing/preventing short circuit to the device. Therefore, it would have been at least obvious to one of ordinary skill in the art to employ basic/inherent elements such as a gate insulating layer, a semiconductor layer, a drain electrode, a source electrode, a protective layer having a contact hole exposing the drain electrode, a pixel electrode connected to the drain electrode through a contact hole, as common and known in TFT (active matrix)-LCD devices, and also for achieving advantages such minimizing/preventing short circuit to the device.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 2, 2005

TOAN TON
PRIMARY EXAMINER